IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1 and 3-5, CANCEL claim 2, and ADD new claims 6-8 in accordance with the following:

1. (CURRENTLY AMENDED) A design method for a bus system equipped with a plurality of device units, a data bus on which said plurality of device units are connectible, a timing-signal supply source supplying a timing signal to said plurality of device units through a timing-signal bus, a bus switch connecting and disconnecting a signal between said plurality of device units and said data bus, and a bus-switch control part controlling the connecting and disconnecting operations of said bus switch, said design method comprising:

computing, for each of said plurality of device units, based on a cycle of said timing signal, a signal propagation delay in each one of said plurality of device units, signal propagation delays in said timing-signal bus and said data bus, and a setup time in ~~another one~~one or more other of said plurality of device units or ~~another device~~one or more other devices connected on said data bus, timing at which, when each one of said plurality of device units is connected on said data bus being active, noise propagates to the one or more other ~~one~~ of said plurality of device units or to the one or more other ~~device~~ devices connected on said data bus; and

computing, based on said computed timing, connection timing at which each one of said plurality of device units is connected on said data bus, wherein

in said computing, based on said computed timing, said connection timing is computed by computing a delay time "b" needed for said bus switch to connect each one of said plurality of device units on said data bus after each one of said plurality of device units is connected on said timing-signal bus.

2. (CANCELLED)

3. (CURRENTLY AMENDED) The design method as set forth in claim 1, wherein:
in said computing, for each of said plurality of device units, a timing margin M {=

(T + g) – (a + b + c + d + e + f) – S} between arrival of said noise at the one or more other ~~one~~ of said plurality of device units or the one or more other ~~device~~ devices connected to said data bus and start of said setup time is computed as propagation timing of said noise, based on cycle "T" of said timing signal, skew "a" from said timing-signal supply source to said bus switch control part, delay time "b" of said bus switch, signal propagation delay time "c" between said bus switch control part and said bus switch, operating delay time "d" of said bus switch, pulse width (time) "e" of said noise, propagation delay time "f" of said noise in each one of said plurality of device units and said data bus, skew "g" from said timing-signal supply source to the one or more other ~~one~~ of said plurality of device units or the one or more other ~~device~~ devices connected on said data bus, and setup time "S" in said bus system, and

in said computing, based on said computed timing, the delay time "b" of said bus switch is computed so that said timing margin M is 0 or greater.

4. (CURRENTLY AMENDED) A bus system comprising:

a plurality of device units;

a data bus on which said plurality of device units are connectible;

a timing-signal supply source supplying a timing signal to said plurality of device units through a timing-signal bus, a bus switch connecting and disconnecting a signal between said plurality of device units and said data bus; and

a bus-switch control part controlling the connecting and disconnecting operations of said bus switch;

wherein said bus-switch control part controls said bus switch so that each one of said plurality of device units is connected on said data bus after a delay time "b" of said bus switch from connection of each one of said plurality of device units with said timing-signal bus,

and wherein, based on cycle "T" of said timing signal, skew "a" from said timing-signal supply source to said bus switch control part, the delay time "b" of said bus switch, signal propagation delay time "c" between said bus switch control part and said bus switch, operating delay time "d" of said bus switch, pulse width (time) "e" of noise caused when each one of said plurality of device units is connected on said data bus being active, propagation delay time "f" of said noise in each one of said plurality of device units and said data bus, skew "g" from said timing-signal supply source to ~~another one~~one or more other of said plurality of device units or ~~another~~ one or more other devices~~device~~ connected on said data bus, and setup time "S" in said bus system, the delay time "b" of said bus switch is computed as a value such that a timing margin M {= (T + g) – (a + b + c + d + e + f) – S} from arrival of said noise at the other ~~one~~ of

said plurality of device units or the one or more other ~~device~~ devices to start of said setup time is 0 or greater.

5. (CURRENTLY AMENDED) A device unit connectible to a printed-circuit board equipped with a data bus, a timing-signal supply source, and a timing-signal bus connected to said timing-signal supply source, comprising:

a bus switch connecting and disconnecting a signal between said device unit and said data bus; and

a bus-switch control part controlling the connecting and disconnecting operations of said bus switch;

wherein said bus-switch control part controls said bus switch so that said device unit is connected on said data bus after a delay time "b" of said bus switch from connection of said device unit with said timing-signal bus, and

wherein, based on cycle "T" of said timing signal, skew "a" from said timing-signal supply source to said bus switch control part, the delay time "b" of said bus switch, signal propagation delay time "c" between said bus switch control part and said bus switch, operating delay time "d" of said bus switch, pulse width (time) "e" of noise caused when said device unit is connected on said data bus being active, propagation delay time "f" of said noise in said device unit and said data bus, skew "g" from said timing-signal supply source to ~~another~~ one or more other device ~~unit~~ units other than said device unit or ~~another device~~ one or more other devices connected on said data bus, and setup time "S" in said bus system, the delay time "b" of said bus switch is computed as a value such that a timing margin M {= (T + g) – (a + b + c + d + e + f) – S} from arrival of said noise at the one or more other device ~~unit~~ units or the one or more other ~~device~~ devices to start of said setup time is 0 or greater.

6. (NEW) The method of claim 1, further comprising:

computing the delay time "b" so that noise from each one of the plurality of device units does not overlap the setup time of each one of the plurality of device units.

7. (NEW) The bus system of claim 4, wherein the delay time "b" is computed so that noise from each of the plurality of device units does not overlap the setup time of each of the plurality of device units.

8. (NEW) The device unit of claim 5, wherein the delay time "b" is computed so that noise from each of the one or more device units does not overlap the setup time of each of the one or more device units.